## Remarks

Claims 58-91 are pending in the subject application. Applicants acknowledge that claims 58-63 and 87 have been withdrawn from further consideration as being drawn to a non-elected invention. By this Amendment, Applicants have canceled claims 58-91 and added new claims 92-103. Support for the new claims can be found throughout the subject specification and in the claims as originally filed (see, for example, page 25, lines 19-25). Entry and consideration of the amendments presented herein is respectfully requested. Accordingly, claims 92-103 are currently before the Examiner. Favorable consideration of the pending claims is respectfully requested.

Claim 58 is objected to for encompassing non-elected inventions. Claim 87 is objected to because of informalities. By this Amendment, claims 58 and 87 have been canceled. Applicants note that new claim 92 contains only elected subject matter. Accordingly, reconsideration and withdrawal of the objection is respectfully requested.

Claims 58-63 and 87 are rejected under 35 USC §112, first paragraph, as nonenabled by the subject specification. The Office Action indicates that the subject application does not teach any functional characteristics of the peptide encoded by SEQ ID NO: 2 apart from the assertion that it might have chemotactic activity. In addition, the Office Action states that the specification does not teach any variant, fragment or derivative of the peptide. With respect to this rejection, the Office Action argues that the specification does not teach the region of the peptide that should be preserved to retain chemotactic activity and there is no biological activity, expression pattern, phenotype, disease or condition, ligand, binding partner or any other specific feature that is disclosed as being associated with the sequence of SEQ ID NO: 2. Applicants respectfully assert that the claims as filed are enabled and traverse the rejection.

In order to establish a *prima facie* case of lack of enablement, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *See In re Wright*, 999 F.2d 1557, 1561-62, 27 U.S.P.Q.2d 1510, 1513 (Fed. Cir. 1993) (examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure). *See also In re Morehouse*, 545 F.2d 162, 192 U.S.P.Q. 29 (C.C.P.A. 1976). Enablement is a legal determination of whether a patent enables one skilled in the art to make and use the claimed invention (*Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 960, 220

U.S.P.Q. 592, 599 (Fed. Cir. 1983)) and is not precluded even if some experimentation is necessary. *Atlas Powder Co. v. E.I. Du Pont De Nemours & Co.*, 750 F.2d 1569, 1576, 224 U.S.P.Q. 409, 413 (Fed. Cir. 1984); *W.L. Gore and Associates v. Garlock, Inc.*, 721 F.2d 1540, 1556, 220 U.S.P.Q. 303, 315 (Fed. Cir. 1983). Applicants also submit that nothing more than objective enablement is required, and therefore it is irrelevant whether this teaching is provided through broad terminology or illustrative examples. Additionally, the Patent and Trademark Office Board of Patent Appeals and Interferences has stated: "The test [for enablement] is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the invention claimed". *Ex parte Jackson*, 217 U.S.P.Q. 804, 807 (1982); *see also Ex parte Erlich* 3 U.S.P.Q.2d 1011 (B.P.A.I. 1982) (observing that although a method might be "tedious and laborious," such experimentation is nevertheless "routine" defining "routine" experiments as those which use known methods in combination with the variables taught in the patent to achieve the expected, specific, patented result).

In this regard, Applicants respectfully submit that the as-filed specification enables the claimed invention. For example, the protein of SEQ ID NO: 2 was identified as being a CXC-chemokine-like protein on the basis of the teachings provided in the as-filed specification at pages 32-44. Additionally, the polypeptide of SEQ ID NO: 2 was further cloned, expressed in mammalian cells and purified. Additionally, the role of chemokines as chemotactic agents with cells, *e.g.*, leukocytes, is well-known in the art and the as-filed specification clearly provides assays suitable for assessing the activity of the claimed polypeptide. Thus, it is respectfully submitted that the as-filed specification enables the claimed invention even if some experimentation was required. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Claims 58-63 and 87 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants respectfully assert that there is adequate written description in

the subject specification to convey to the ordinarily skilled artisan that they had possession of the claimed invention; however, in an effort to advance prosecution in this matter, the rejected claims have been canceled and claims directed to polypeptides comprising SEQ ID NO: 2, or the mature form thereof, have now been presented. It is respectfully submitted that these claims comply with the written description requirement and reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Claims 58-63 and 87 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Applicants respectfully assert that the claims as filed are definite. However, by this Amendment, the rejected claims have been canceled, thereby rendering this rejection moot. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Claims 58-63 are rejected under 35 U.S.C. § 103(a) as obvious over Bates *et al.* (2000) in view of Sibson *et al.* (WO 94/01548). The Office Action states that the Bates *et al.* reference discloses the DNA sequence of the human chromosome 13; therefore, the sequence was known as an ORF as proved by the alignment and was part of a novel gene, KIAA0916. Bates *et al.* are silent about using the sequence to obtain a peptide labeled or not. The Office Action asserts that Sibson *et al.* disclose that it is generally useful to place a desired DNA sequence into an expression vector, host cell, and express the encoded protein, as well as to raise antibodies to protein encoded by such DNA. Applicants respectfully assert that the claimed invention is not obvious over the cited references and traverse the rejection.

The Examiner bears the initial burden of showing unpatentability. *See, e.g., In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (quoted in *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct 1727, 82 USPQ2d 1385, 1396 (2007)). Additionally, common knowledge and common sense can be a part of this reasoning. See *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1367, 80 USPQ2d 1641, 1650 (Fed. Cir. 2006).

In this case, however, the Examiner has only made conclusory statements and has not presented sufficient evidence that a person of ordinary skill in the art would have known to express the sequence identified in the alignment (and/or that complementary thereto) that was provided in the Office Action. For example, the subsequence pointed to in establishing the obviousness rejection forms a portion of a larger genomic segment of DNA containing in excess of 124,900 bases and encoding a polypeptide in excess of 4,500 amino acids. Aside from the assertion that the sequence was known as an ORF and was part of a novel gene, no reason is provided in the Office Action as to why one skilled in the art would have selected this subsequence for expression absent the alignment of a reverse sequence of the nucleic acid sequence disclosed to encode SEQ ID NO: 2.

Applicants also note that the Office Action argues that the cited subsequence is an open reading frame (ORF) within this larger sequence; again, however, the evidence proffered in this regard does not indicate such is the case. Indeed, the reference to which the Office Action refers provides no indication or evidence as to whether the aligned sequence is a part of an ORF or an intron within the genomic sequence of which it forms but a small part. Applicants also respectfully submitted that the segment of the nucleic acid cited in the Office Action as rendering the claimed invention obvious does not form a portion of the nucleic acid sequence translated into mRNA (see attached EMBL printout where the segment cited in the Office Action is not listed in the segments giving rise to mRNA).

Finally, the Office Action also fails to indicate whether the cited subsequence is frameshifted (relative to the entire sequence disclosed in the EMBL accession number) when aligned with the reverse complement of the sequence that encodes the polypeptide of SEQ ID NO: 2. Additionally, no motivation to frameshift the sequence disclosed by Bates *et al.* has been provided by the Office Action if such is necessary to provide the necessary alignment of the two nucleotide sequences in order to arrive at a sequence encoding the polypeptide of SEQ ID NO: 2. Thus, should it have been necessary to frameshift the nucleotide sequence disclosed by Bates *et al.*, it is respectfully submitted that the Office Action fails to establish why one skilled in the art would wish to do so in order to arrive at a nucleic acid sequence that encodes the polypeptide of SEQ ID NO: 2. Accordingly, reconsideration and withdrawal of the obviousness rejection set forth in this matter is respectfully requested.

Claim 87 is rejected under 35 U.S.C. § 103(a) as obvious over Bates *et al.* (2000) in view of Sibson *et al.* (WO 94/01548) and in further view of Scherberg (U.S. Patent No. 4,383,033). The Office Action states that Scherberg teaches radiolabeled proteins which may be employed advantageously in diagnosis to provide marker compounds for chromatographic detection, immunoprecipitation, and serum clearance testing. Applicants respectfully assert that the claimed invention is not obvious over the cited references.

As indicated above, Applicants submit that the cited combination of Bates *et al.* and Sibson *et al.* fails to establish a *prima facie* case of obviousness for the claimed invention. Particularly, no motivation to select the subsequence of the KIAA0916 genomic sequence pointed to in the Office Action has been provided. Further, it does not appear that the Office Action adequately establishes that the subsequence identified in the Office Action is an ORF or that it is in the proper reading frame to encode a polypeptide of SEQ ID NO: 2 when its reverse strand is expressed. Scherberg does not cure these deficiencies. Accordingly, reconsideration and withdrawal of the obviousness rejection over Bates *et al.* (2000) in view of Sibson *et al.* and in further view of Scherberg is respectfully requested.

It should be understood that the amendments presented herein have been made solely to expedite prosecution of the subject application to completion and should not be construed as an indication of Applicants' agreement with or acquiescence in the Examiner's position. Applicants expressly reserve the right to pursue the invention(s) disclosed in the subject application, including any subject matter canceled or not pursued during prosecution of the subject application, in a related application.

In view of the foregoing remarks and amendments to the claims, Applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

Applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Frank C. Eisenschenk, Ph.D.
Patent Attorney
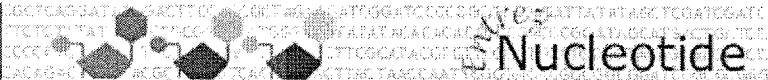Registration No. 45,332
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FCE/sl
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NCBI    Nucleotide

PubMed    Nucleotide    Protein    Genome    Structure    PMC    Taxonomy    OMIM    Books

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